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Substitu	IS ON TOTAL THEORY			Application Number	10/632,000	
INF	ORMATION	N DIS	CLOSURE	Filing Date	07/30/2003	
STA	STATEMENT BY APPLICANT			First Named Inventor	Wolman, Abel	
	#1	4		Art Unit	24712/65	
	(Use as many sh	eets as r	necessary)	Examiner Name	Mizrahi	
Sheet	1	of	6	Attorney Docket Number	1624-3641	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
4	1	BAIRD, J. C., Selection from Fundamentals of Scaling and Psychophysics, Wiley, 1978, pp. 177–205.	
A Company	2	BORG, I. AND GROENEN, P., Modern Multidimensional Scaling: Theory and Applications, Springer, New York, 1997, pp. 15-27; 159-173.	
	3	CARROLL, J. D. AND CHANG, J., "Analysis of individual differences in multidimensional scaling via an n-way generalization of "Eckart-Young" decomposition," Psychometrika, 35,	
	//	1970, pp. 283–319.	
	4	COMMANDEUR, J. AND HEISER, W., "Mathematical derivations in the proximity scaling (Proxscal) of symmetric data matrices," Tech. Report No. 99-93-03, Department of Data Theory,	
	//	Leiden University, Leiden, The Netherlands, 1999.	
	5	CUNNINGHAM, J. P. AND SHEPARD, R. N., "Monotone mapping for similarities into a general metric space," J. Math. Psychol., 11, 1974, 335–363.	
	6	DE LEEUW, J. AND HEISER, W., "Theory of multidimensional scaling," in P. R. Krishnaiah and L. N. Kanal, Eds., Handbook of Statistics, Vol. 2. North-Holland, New York, 1982,	
	7	FANG, W., "Disagreement degree of multi-person judgements in an additive structure," Mathematical Social Sciences, 28, 1994, pp. 85–111.	
V	8	GIFI, A., "Algorithm descriptions for Anacor, Homals, Princals, and Overals," Tech. Report No. RR-89-01, Department of Data Theory, University of Leiden, 1989.	

	_ Diagram		
Examiner Signature	PRIMARY EXAMINER	Date Considered	1/27/06
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INF	ORMATION	DIS	CLOSURE	Filing Date	07/30/2003	
ST	ATEMENT E	BY A	PPLICANT	First Named Inventor	Wolman, Abel	
				Art Unit	2471 2/65	
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		NON DATEME LITEDATUDE DOCUMENTO	
Examiner Initials*	Cite No. ¹	NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
U	9	GOODHILL, G. J. ET AL., "An evaluation of the use of multidimensional scaling for understanding brain connectivity," Research Paper EUCCS/RP-63, University of Edinburgh, 1994,	
6 "		1994, pp. 1–23.	
	10	KENDALL, G. D., "Seriation," in Hodson et al., Mathematics in the Archaeological and Historical Sciences, 1970, pp. 215–251.	
	11	LINGOES, J. C. ET AL., Geometric Representations of Relational Data, Mathesis Press, Ann Arbor, 1979, pp. 313–317, 529–539, 791–815.	
	12	MCGEE, V. E., "The multidimensional analysis of 'elastic' distances," The British Journal of Mathematical and Statistical Psychology, 19, 1966, 181–196.	
	13	MCGEE, V. E., "Multidimensional scaling of n sets of similarity measures: a nonmetric individual differences approach," Multivariate Behavioral Research, 1968, pp. 233–249.	
	14	MIELKE, P. W. AND BERRY, K. J., Permutation Methods: A Distance Function Approach, Springer, New York, 2001, pp. 32–36.	,
	15	NARENS, L., Theories of Meaningfulness. Lawrence Erlbaum, Mahwah, New Jersey, 2002, pp. 45–56.	
	16	OSBORNE, D. K., "Further extensions of a theorem of dimensional analysis," J. Math. Psychol., 7, 1970, pp. 236–242.	
(Je	17	OVCHINNIKOV, S., "Means of ordered sets," Math. Social Sci., 32, 1996, pp. 39–56. DIANE D. MIZHAHI FRIMARY EXAMINED	

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INF	ORMATION	DIS	SCLOSURE	Filing Date	07/30/2003	
STA	STATEMENT BY APPLICANT			First Named Inventor	Wolman, Abel	
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Sheet	3	of	6	Attorney Docket Number	1624-3641	

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P	18	ROBERTS, F. S., "Limitations on conclusions using scales of measurement," in S. M. Pollock et al., Eds., Handbooks in OR & MS, Vol. 6, Elsevier, New York, 1994, pp. 621–669.	
	19	SAATY, T. L., Selections from The Analytic Hierarchy Process: Planning, Priority Setting and Resource Allocation, RWS Publications, Pittsburgh, 1990, pp. a19-a24.	
	20	SCHIFFMAN, S. S. ET AL., Introduction to Multidimensional Scaling, Academic Press, 1981, pp. 74–82, 321–333.	
	SIEGEL, S. AND CASTELLAN, J., "Nonparametric statistics for t sciences," 2nd Ed., McGraw-Hill, 1988, pp. 22–36.		
	22	SINHA, D. ET AL, "A general class of aggregation operators with applications to information fusion in distributed systems," 1989 IEEE Intel Conference on Systems,	
	//	Man and Cybernetics, (PROC), 1989, pp. 921–927.	
	23	STEVENS, S. S., "On the theory of scales of measurement," Science, 103, 1946, pp. 677–680.	
	24	TAKANE, Y. ET AL., "Nonmetric individual differences multidimensional scaling: an alternating least squares method with optimal scaling features," Psychometrika, 42,	
	//	1977, pp. 7–67.	
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			NON PATENT LITERATURE DOCUMENTS	
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R		25	WISH, M. AND CARROLL, J. D., "Multidimensional scaling and its applications," in P. R. Krishnaiah and L. N. Kanal, Eds., Handbook of Statistics, Vol. 2. North-Holland,	
		//	PP. 317-345	
		26	YOUNG, M. "The organization of neural systems in the primate cerebral cortex," Biological Sciences, 252, 1993, pp. 13–18.	
		27	ZHOU ET AL., "A linearly constrained least squares approach for multisensor data fusion," SPIE, 3067, 1997, pp. 118–129.	
		28	PERREAULT, W. D. AND YOUNG, F. W., "Alternating least squares optimal scaling: analysis of nonmetric data in marketing research,"	
1		//	Journal of Marketing Research, 17, 1980, 1-13.	

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		Application Number	10/632,000		
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		First Named Inventor	Wolman, Abel		
		Art Unit	2174 3/6)		
		Examiner Name	MIZVALII		
Sheet 5	of 6	Attorney Docket Number	1624-3641		

Examiner Cite No. 1		Document Number Number-Kind Code ² (J. Irran.n)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
M		US- 5,321,613	06-1994	Porter et al	10-		
8		US- 5,437,279	08-1995	Gray, Lincoln C.			
		US- 5,706,402	01-1998	Bell, Anthony J.			
		^{US-} 5,729,451	03-1998	Gibbs, et al	•		
		^{US-} 5,175,710	12-1992	Hutson			
		^{US-} 5,181259	01-1993	Rorvig			
		^{US-} 5,235,506	08-1993	O'Brien, Jr.			
		US- 5,245,587	09-1993	Hutson			
7		US- 5,402,335	03-1995	O'Brien			
1		US- 5,348,020	09-1994	Hutson			
		^{US-} 5,422,961	06-1995	Simard			
		^{US-} 5,437,279	08-1995	Gray			
		US- 5,490,516	02-1996	Hutson			
		US- 5,574,837	11-1996	Clark et al			
		US- 5,579,766	12-1996	Gray			
1		US- 5,596,644	01-1997	Abel et al			
 		US- 5,602,938	02-1997	Akiyama et al			
14		US- 5,625,767	04-1997	Bartell et al			
V		^{US-} 5, 802,207	09-1998	Huang			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
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U. S. PATENT DOCUMENTS Name of Patentee or Pages, Columns, Lines, Where Examiner **Document Number** Publication Date MM-DD-YYYY Applicant of Cited Document Relevant Passages or Relevant Figures Appear Number-Kind Code² (J known) US- 5,987,094 11-1999 Clark et al US- 6,332,034 12-2001 Makram-Ebeid et al US- 6,546,117 04-2003 Sun et al US ับระ USiis. US-US-US US ÜS-US-US US US US IIS. **FOREIGN PATENT DOCUMENTS** Name of Patentee or Pages, Columns, Lines, Cite Foreign Patent Document Examiner Publication Date Applicant of Cited Document Where Relevant Passages Initiats' No. MM-DD-YYYY Or Relevant Figures Appear Country Code3 "Number 4 "Kind Code6 (if known) DIANE D. WIZEA Date

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